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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,868	08/21/2003	Koichi Kasahara	111878.01	6863
25944	7590	07/22/2005	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			JOHNSON, CHRISTINA ANN	
			ART UNIT	PAPER NUMBER
			1725	
DATE MAILED: 07/22/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/644,868

Applicant(s)

KASAHARA ET AL.

Examiner

Christina Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/12/03, 10/18/03, 9/4/03</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections – 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 4-6 are rejected under 35 U.S.C.102(b) as being anticipated by Caren et al.

Caren et al. (US 6,047,543) discloses a catalyst structure useful for enhancing a gas-phase chemical reaction, specifically useful for enhancing reactions that reduce the emission of pollutants from vehicles. The catalyst structure disclosed is a honeycomb construction comprising two honeycomb catalyst "bricks," which are honeycomb structures holding noble metal catalysts (Column 3, lines 21-22). The bricks are positioned such that one of them is upstream of the other. The noble metal catalysts are revealed to be Pt, Pd, and Rh (Column 3, lines 32-36). Zeolite and alumina are disclosed as possible substrate components on the honeycomb carrier (Columns 11-12, lines 63-67 and 1-8).

As each and every element of the claimed invention is taught in the prior art as recited above, the claims are anticipated by Caren et al.

3. Claims 1 and 3-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamamoto et al.

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Yamamoto et al. (US 6,047,544) discloses an exhaust purification device useful for purifying exhaust gas from an automobile engine. The device disclosed comprises two catalyst units, one downstream from the other (Column 4, lines 13-28). The downstream unit is a monolithic substrate coated with two layers, the first being a zeolite hydrocarbon absorbent and the second being a three-way catalyst. The second layer is formed on top of the first. The upstream unit is a support containing a second three-way catalyst. Possible embodiments disclosed include Pd, Pt, and Rh as the three-way catalysts (Column 28, lines 8-9). Embodiments disclosed also describe alumina as a substrate in the catalyst layer in the downstream unit (Column 28, lines 36-37).

As each and every element of the claimed invention is taught in the prior art as recited above, the claims are anticipated by Yamamoto et al.

***Claim Rejections – 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Caren et al. as applied above for claims 1 and 4-6.

The teachings of Caren et al. are as described above for claims 1 and 4-6.

The difference between the reference and the claims is that the reference does not disclose the relative lengths of the two catalyst bricks. However, one of ordinary skill in the art would appreciate that the total catalytic activity of the invention would depend upon the amounts of each catalyst material present. Given the constraint of a single support with tubular passages, the only variable impacting the amount of each catalyst material is the length of the tube that it occupies. Thus, a person of ordinary skill in the art would have motivation to optimize the lengths of the catalyst materials within the catalyst support, which would result in specific relative lengths as required by the instant claim. It would have been obvious to one having ordinary skill in the art at the time the invention was made to choose the instantly claimed relative length range through process optimization, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See *In re Boesch*, 205 USPQ 215.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. as applied above for claims 1 and 3-6.

The teachings of Yamamoto et al. are as described above for claims 1 and 3-6.

The difference between the reference and the claims is that the reference does not disclose the relative lengths of the two catalyst units. However, one of ordinary skill in the art would appreciate that the total catalytic activity of the invention would depend upon the amounts of each catalyst material present. Given the constraint of a single support with tubular passages, the only variable impacting the amount of each catalyst

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material is the length of the tube that it occupies. Thus, a person of ordinary skill in the art would have motivation to optimize the lengths of the catalyst material within the catalyst support, which would result in specific relative lengths as required by the instant claim. It would have been obvious to one having ordinary skill in the art at the time the invention was made to choose the instantly claimed relative length range through process optimization, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See *In re Boesch*, 205 USPQ 215.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Johnson, whose telephone number is (571) 272-1176. The examiner can normally be reached on Monday to Friday, 7:30-5, with alternate Fridays off.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn, can be reached at (571) 272-1171. The fax number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have question on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Christina Johnson  
Patent Examiner  
Art Unit 1725  
7/19/05

CAJ  
July 19, 2005